

ABSTRACT

An enzyme which transfers N-acetylgalactosamine to N-acetylglucosamine via a β 1-4 linkage was isolated and the structure of its gene was explained. This led to the production of said enzyme or the like by genetic engineering techniques, the production of oligosaccharides using said enzyme, and the diagnosis of diseases on the basis of said gene or the like.

The present invention uses a protein having the amino acid sequence shown in SEQ ID NO: 1, 3, 26 or 27 in the Sequence Listing or a variant of said amino acid sequence wherein one or more acids are substituted or deleted, or one or more acids are inserted or added and having the activity of transferring N-acetylgalactosamine (GalNAc) to N-acetylglucosamine serving as a substrate via a β 1-4 linkage and nucleic acids encoding said protein.